ASIA PACIFIC NATURAL GAS VEHCLES ASSOCIATION (ANGVA)
Together we propagate and support the efficient utilization of low to net zero carbon fuels
for cleaner air and better life in the Asia Pacific Region

ANGVA2U Info *02/2022. 11th February 2022 (for ANGVA members only)*

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1.0 Selected News / Articles

1.1 India

CNG's becoming preferred choice for CVs

10th February 2022. ET Bureau. By Sharmistha Mukherjee

Senior industry executives ET spoke to said the uptick in demand for CNG-driven commercial vehicles has been especially strong in the past 12-18 months.

Compressed natural gas, already popular among cost-conscious passenger vehicle buyers, is now becoming the fuel of choice in the commercial vehicle segment, amid a sharp rise in the price of diesel. Senior industry executives ET spoke to said the uptick in demand for CNG-driven commercial vehicles has been especially strong in the past 12-18 months.

"The price differential between diesel and CNG has increased in the past few months. There has been an increase in the price of both diesel and CNG, but CNG still has a lot of headroom to grow. Sales of CNG vehicles have been rising due to its better cost efficiency," said Sanjeev Kumar, head (medium and heavy commercial vehicles) at Ashok Leyland.

"We expect demand for CNG vehicles will continue to grow, especially on shorter routes," he said, speaking on the sidelines of the launch of the company's E-Comet Star ICV CNG range. Vinod Aggarwal, managing director of VE Commercial Vehicles, confirmed the higher demand. "There has been a huge migration towards CNG in light- and medium-duty trucks. In Delhi, the price differential between diesel and CNG is more than ₹40. Fuel efficiency is similar. Operators are now replacing older vehicles with CNG," he said.

The fuel cost for running a medium-duty truck for 7,000 km, at 7 km a litre of diesel, ranges between Rs 80,000 and Rs 90,000, but if the fuel is CNG, the cost would reduce to Rs 45,000-50,000. In Delhi, diesel was selling at Rs 86.67 a litre and petrol at Rs 95.41 on Wednesday. CNG was priced at Rs 43.40 per kg.

Rajesh Kaul, vice president (sales & marketing), Commercial Vehicle Business Unit at market leader Tata Motors, said: "Apart from vehicle operating cost savings on account of improved fuel efficiency and lower prices of CNG, the CNG vehicles also offer a reduction in costs owing to the exemption in green tax in certain states."

At Tata Motors, the share of CNG vehicles in intermediate and light commercial vehicles and small commercial vehicles has reached around 44% and 33%, respectively, from 16% and 5% in FY21. In its overall commercial vehicle portfolio, CNG accounted for about 16% year-to-date in FY22, compared with 3.4% in FY21.

Source: *https://economictimes.indiatimes.com/industry/renewables/cngs-becoming-preferred-choice-for-cvs/articleshow/89466300.cms*

1.2 India

3,628 CNG stations commissioned till Dec 2021

11th February 2022. MPost.

New Delhi: The Minister of State for Petroleum and Natural Gas, Rameswar Teli in a written reply to a question in the Lok Sabha on Thursday informed that the Government has not fixed any criteria for the establishment of CNG stations.

CNG stations are set up by City Gas Distribution (CGD) entities authorized by Petroleum & Natural Gas Regulatory Board (PNGRB) for development of City Gas Distribution (CGD) network in a Geographical Area (GA).

As on December 31, 2021, 3,628 CNG stations have been commissioned across the county. These CNG stations are set up by the entities as per the Minimum Work Plan determined by PNGRB and their techno-commercial feasibility.

Upto the 10th CGD bidding round, PNGRB has authorized 228 Geographical Areas (GAs) in 27 States/Union Territories including the states of Rajasthan and Bihar for the development of City Gas Distribution networks as per the target set, action plan proposed and timeline determined in the MWP.

Further, a part of future action, in the 11th round, PNGRB has received bids against 61 GAs covering 215 (212 full & 3 part) districts and Letter of Intent (LoIs) have been issued for 52 GAs. Further, PNGRB has invited bid on January 7, 2022 for 5 GAs covering 27 districts under the 11A CGD Bidding Round.

Source: *http://www.millenniumpost.in/business/3628-cng-stations-commissioned-till-dec-2021-467877?infinitescroll=1*

1.3 Nigeria

Target to convert one million vehicles to autogas now three years, says FG

9th February 2022. By Kingsley Jeremiah, Abuja.

Initial plans by the Federal Government to convert one million vehicles plying roads in the country to run on gas within a year has now been moved to three years.

Timipre Sylva

In December 2020, President Muhammadu Buhari had promised Nigerians, especially labour leaders, that an autogas policy would ensure that vehicles plying the country's roads run on Compressed Natural Gas (CNG). By now, one million vehicles are, according to the President, supposed to be running on gas in the country. But the plan has not worked.

In reinvigorating the plan, the Federal Government last week, stated that part of its plans to ensure life is made easier for Nigerians before full removal of subsidy on fuel, included the auto-gas plan.

Minister of State for Petroleum Resources, Timipre Sylva, told journalists that discussion has been ongoing with original manufacturers to ensure kits for conversion are available in Nigeria.

While the plan was to convert at least one million cars within a year and ensure with promise that nothing less than 40 per cent vehicles plying Nigerian roads would run on compressed natural gas, documents obtained from the ministry showed that the country may need three years to convert one million cars.

In the different scenarios captured by the government, tricycles, four to six-cylinder cars, eight-cylinder engines and buses could be converted in three years or 36 months. Government anticipated that 200,000, 300,000 and 500,000 could be converted in the first, second and third year respectively or 500,000 vehicles would be converted in about 18 months and the other 500,000 within 19 to 36 months.

In the period, 200,000 tricycles were projected to be converted, 610,000 four to six-cylinder engines, 100,000 eight-cylinder SUVs, and 100,000 buses.

The government had noted that CNG was selected as the fuel of choice because it holds a comparative advantage due to its ease of deployment, its comparatively lower capital requirements, commodity's supply stability, existing in-country volumes and local market commercial structure which relies predominantly on the Naira.

Coming at a time when the Federal Government had said subsidy removal would not be considered, Sylva had noted that autogas rollout would provide an alternative to Premium Motor Spirit (PMS). "We said we must provide alternative fuel and the alternative that we concluded on was the autogas alternative. To provide it for our people.

"Since this agreement between us (government and marketers), a lot of work has been going on and we have come to a certain point where we need to take it further. But we cannot move further without ensuring that you as our partners are fully on board."

He had said the government would ensure rapid conversion of vehicles by providing equity participation, encourage credit scheme investments with partner nations and OEMS, create centralised management portals to maintain standards, evaluate utilisation and impact of government equity and overall project.

Source: *https://guardian.ng/energy/target-to-convert-one-million-vehicles-to-autogas-now-three-years-says-fg/*

1.4 Kyrgyzstan

EBRD to provide 33 million Euro for purchase of 250 CNG buses for Bishkek, repair of bus depot

11th February 2022.

AKIPRESS.COM - Cabinet Chairman Akylbek Japarov has approved ratification of the loan and grant agreement between Kyrgyzstan and the European Bank for Reconstruction and Development on Green Cities Framework's Bishkek Buses Project signed on September 16, 2021 in Bishkek.

The Project will provide Bishkek with a new bus fleet that will improve the reliability and quality of public transport services, improve air quality and reduce GHG emissions by replacing the existing outdated diesel buses with 250 lower emission CNG (compressed natural gas) buses.

The Project will include rennovation of the depot, significantly expand its operational fleet, resume service on all of its abandoned routes and start serving new routes in recently developed city areas. It will also stimulate modal shift from private cars back to public transport.

The European Bank for Reconstruction and Development will provide 25 million Euro concessional loan anf 8 million Euro grant for the Project.
The EBRD loan will be split into two tranches: Tranche I of €16 million and Tranche II of €9 million.
Source:
https://akipress.com/news:667942:EBRD_to_provide_33_million_Euro_for_purchase_of_250_CNG_buses_for_Bishkek,_repair_of_bus_depot/

1.5 Estonia

Alexela begins supply of liquefied biomethane in the Estonian market

8th February 2022. By HT Correspondent.

The firm seeks to neutralize the footprint of heavy-duty vehicles after completing its pilot test for the alternative fuel.

© *Alexela*

Alexela has announced it will be the first company in Estonia to supply the domestic market with 100% carbon-neutral fuel or liquefied biomethane (LBM). With this new launch, the company aims to reduce greenhouse gases of heavy-duty vehicles in the logistics chain.

Currently, the firm uses the sustainable fuel primarily for supplying its own fleet. As stated by a corporate press release, one truck running on liquified biomethane neutralises the negative footprint of a diesel truck.

"It is clear that today, as climate problems are affecting hundreds of millions of people across the globe, companies and individuals must find possibilities for reducing their environmental footprint. The fact that we are the first ones supplying liquified biomethane in the domestic market is not arbitrary, but a result of long-term targeted action towards reducing the emissions of the transport sector," said Aivo Adamson, CEO of Alexela.

"Estonian road transport businesses and industrial enterprises can be sure that we in Alexela are able to create climate neutral supply chains. It is also important to ensure the security of supply and neutralise the footprint of heavy-duty vehicles," added Adamson.

Although the LBM delivery was a pilot in Estonia and in the Baltics, Alexela has got several other projects connected to LNG. In 2017, the company opened an LCNG fuelling station in Võru, South Estonia and in 2019, another was opened in Jüri, near Tallinn, which was also the first public LNG gas station in the Baltics.

This spring, Alexela plans to open an LNG and CNG station in the beer capital Saku, near Tallinn. An LNG terminal is also being built Kotka-Hamina port in Finland.

Source: *https://www.petrolplaza.com/news/29187*

1.6 United States of America

Cows and Pigs Fuel World's First Carbon Neutral PSV

8th February 2022. BY THE MARITIME EXECUTIVE

Harvey Gulf is using biomethane to create renewable LNG for its offshore fleet (Harvey Gulf)

U.S. offshore vessel operator Harvey Gulf International Marine reports taking another step in its sustainability effort giving it the world's first carbon neutral Platform Supply Vessel (PSV). With the introduction of biogas into its operation, Harvey Gulf continues an effort that began seven years ago when they became the first company in North America to operate offshore support vessels powered by liquefied natural gas.

"We always knew the day would come when investors and customers would demand low, or in this case, carbon neutral, zero-emission Platform Supply Vessels," says Shane Guidry, CEO of Harvey Gulf International Marine. "Today, we own five PSVs all of which can operate carbon neutral utilizing Renewable Liquefied Natural Gas. So, for those oil companies that really want to do all they can to reduce emissions while drilling for oil, we have boats that they can now charter to deliver the drilling rigs' needs while burning carbon neutral fuel."

Harvey Gulf introduced the first of its five dual-fuel LNG PSVs in 20215. The 5,300 dwt vessels are 310 feet long using Wartsila engines and azimuthing propellors. After operating as dual-fuel, primarily on LNG and backed up with low sulfur diesel, Harvey successfully added battery power to the first of its PSVs creating the first so-called "tri-fueled" vessels with the company saying it intended to operate only on battery and LNG power, holding the diesel in reserve. Further, after the successful sea trials of the *Harvey Energy*, they said that all the PSVs would be converted to add the electric battery power system by early 2022.

The first of the tri-fuel vessels has now begun to operate exclusively on battery power and Renewable Liquefied Natural Gas (RLNG), with diesel fuel as a backup. The carbon neutral RLNG being consumed onboard Harvey reports is a blend of low carbon intensity sourced biomethane from the swine and bovine industries. The natural methane produced from the waste/byproduct of the pork and dairy sectors is recovered via digesters. The processing of the waste and extracting of the methane results in negative carbon intensity scored renewable gas.

In 2015, Harvey Gulf completed construction of the first LNG marine fueling facility in North America, which is located at its dock facility in Port Fourchon, Louisiana. The facility consists of 270,000 gallons of LNG storage capacity with the ability to transfer 550 gallons of LNG per minute. The LNG fueling terminal is being used to blend the RLNG with locally available LNG to achieve net-zero carbon neutral fuel burn with a low CI score. Use of the RLNG also enables Harvey's clients who charter the company's dual and tri-fueled RLNG vessels to obtain a Carbon Neutral Certificate for their related vessel operations.

While the vessels offer unique advantages, Guidry speculates that they may be the only ones that will ever be operating in the United States due to the high cost of construction. He notes that the vessels cost $113 million each to build saying that he doubts competitors will invest in the current market conditions. "I don't see that happening, as you will never get a day rate from the end-user that will support the construction cost."

The addition of the battery power systems and now the switch to RLNG are building on Harvey's commitment to sustainability. The company has also installed a monitoring system to measure emissions in real-time using it to establish benchmarks that are advising future long-term fuel decisions. Using these steps, Harvey Gulf's goal is to become the world's first ESG certified oil and gas vessel operator.

Source: *https://www.maritime-executive.com/article/cows-and-pigs-fuel-harvey-gulf-s-world-s-first-carbon-neutral-psv*

1.7 Australia

More than one 'renewable gas' in the race

9th February 2022. Australian Associated Press. National. By Marion Rae

There's concern other renewable gases will be neglected with focus on coal and gas-derived hydrogen.

A proposed certification scheme for hydrogen must be expanded to other "renewable gases", the gas energy industry says.

Some in the sector fear fuel alternatives that have been in the pipeline for years will be squeezed out by a government focus on coal and gas-derived hydrogen.

Many opportunities are being missed, despite both Australian and overseas experience demonstrating that fuel switching can deliver significant real emissions abatement, Gas Energy Australia chief executive Brett Heffernan told AAP.

A national technology investment road map is guiding how Australia gets to net zero emissions by 2050.

The road map relies on tweaks and updates from regular Low Emissions Technology Statements (LETS) that must be publicly released by the federal government.

Gas Energy Australia says in its submission for the 2022 statement, now under development, that governments and regulators should recognise the full scope of their sector for decarbonisation.

An Australian hydrogen Guarantee of Origin (GO) certification scheme is being developed under the national hydrogen strategy that, as in many rival economies, is backing the fuel for export and future industrial use.

That scheme intends to measure and track emissions from hydrogen production and cover how it can be produced, whether from renewable sources or from using gas or coal with carbon capture and storage.

But the peak body says biomethane and renewable dimethyl ether (rDME) as well as hydrogen could be used through existing gas infrastructure, such as gas tanks and cylinders.

"The certification scheme proposed for hydrogen must be expanded to cover other renewable gases," Mr Heffernan said.

"This would ensure that these new gas technologies are captured and developed at the same pace as hydrogen, with the same market signals, to foster renewable gas production."

The industry also wants biomethane recognised as a method under the Emissions Reduction Fund.

This would allow more projects - such as bioLNG and bioCNG or the displacement of LPG with biomethane - to earn Australian carbon credits.

Biomethane is produced by the decomposition of organic material like food, agricultural and landfill.

"This creates an organic gas fuel that can be generated in perpetuity," Mr Heffernan said.

Renewable dimethyl ether is being developed from renewable liquid methanol or directly from green hydrogen and biogenic carbon dioxide emissions from organic matter.

"This gas has many of the same properties of propane and butane, so this emerging technology could have exciting applications into the future," he said.

The liquid propellant gas is used for making cosmetics and pharmaceuticals, and rDME can also easily be made renewably, he said.

It is an energy-dense liquid with low pressure like conventional LPG and could be used as a bottled cylinder gas.

One of Australia's big challenges is the delivery of low- cost, clean and reliable energy to households and industry for transportation, heating, lighting and production, according to last year's LETS.
Mr Heffernan said the ether option could ultimately be sold as a 100 per cent renewable alternative for customers wanting green bottled gas.
Source: *https://www.theadvocate.com.au/story/7613936/more-than-one-renewable-gas-in-the-race/*

1.8 Australia

World-first liquefied hydrogen carrier sets sail on inaugural voyage

31st January 2022. Bioenergy International.

The world's first liquefied hydrogen carrier, the Suiso Frontier, departed Victoria (VIC), Australia on January 28, 2022, marking a significant milestone of the Hydrogen Energy Supply Chain (HESC) Pilot Project (photo courtesy Coregas).

The world's first liquefied hydrogen carrier, the Suiso Frontier, departed Victoria (VIC), Australia on January 28, 2022, marking a significant milestone of the Hydrogen Energy Supply Chain (HESC) Pilot Project. Built by Kawasaki Heavy Industries Ltd (KHI), the Suiso Frontier enables the safe transport of liquefied hydrogen in large quantities from the Port of Hastings, VIC, to Kobe, Japan.

The arrival of the Suiso Frontier in Victoria (VIC) last week was heralded as "the genesis of a new global hydrogen supply chain" by Japanese ambassador, Shingo Yamagami. Angus Taylor, Minister for Industry, Energy and Emissions Reduction, also stated that "this was a historic day for Japan, Australia, and the global energy industry".

Coregas Pty Ltd (Coregas), a Wesfarmers Ltd company was contracted in this AU$500 million project, which is backed by the Japanese and Australian governments, providing engineering consultancy, onsite support, and equipment for the gasification plant at Loy Yang in the LaTrobe Valley and the state-of-the-art liquefaction and loading facility at nearby Port of Hastings.

After years of preparation Coregas completed loading of the Suiso Frontier for the first shipment of liquid hydrogen to Japan, said Wodek Jakubik, Innovation Manager at Coregas.

Coal and biomass gasification

For the pilot project, 99.999 percent pure hydrogen has been produced from Latrobe Valley coal and biomass via gasification, trucked to Hastings, cooled to -253 degrees C, and subsequently liquified to less than 800 times its gaseous volume to create highly valuable liquefied hydrogen.

Coregas provided oxygen, nitrogen, helium, and calibration gases to both facilities, the hydrogen compressor for the gasification plant, and transportation services to move both liquefied and gaseous hydrogen while being responsible for the operation and maintenance (O&M) of the liquefaction plant on a 24/7 shift basis. Coregas engineers were also responsible for loading the Suiso Frontier with liquefied hydrogen.

Once connected to the vessel's 1 250 m3 vacuum-insulated, double-shell-structure liquefied hydrogen storage tanks, the filling was completed by Coregas engineers using an on-site portable delivery vehicle. Great cooperation from all project partners has ensured its success and we wish the Captain and crew of the Suiso Frontier the very best for their return voyage to Japan, said Jakubik whose Coregas team was congratulated by the Suiso Frontier's Captain on a job well done.
The Australian-Japan HESC partnership is anticipated to create 30 000 full-time jobs across the Gippsland and Mornington Peninsula regions over the life of the project. The group includes Kawasaki Heavy Industries Ltd., Electric Power Development Co. Ltd. (J-Power), Iwatani Corporation, Marubeni Corporation, AGL, and Sumitomo Corporation.
Source: *https://bioenergyinternational.com/storage-logistics/world-first-liquefied-hydrogen-carrier-sets-sail-on-inaugural-voyage*

1.9 Malaysia

MoU signed to develop green hydrogen and ammonia project in Malaysia

27th January 2022.

SEDC Energy, a subsidiary of Sarawak Economic Development Corporation (SEDC), has signed a memorandum of understanding (MoU) with South Korea-based Samsung Engineering, Posco and Lotte Chemical to develop a green hydrogen and ammonia project in Bintulu, Sarawak. Hydropower and natural gas will be converted to green hydrogen/methanol and blue hydrogen at the facility, which will then be delivered to Korea and Sarawak.

According to a pre-feasibility study on the project that was conducted in 2021, the facility expected to produce 7,000 tonnes of green hydrogen, 600,000 tonnes of blue ammonia, 630,000 tonnes of green ammonia and 460,000 tonnes of green methanol per year. The results of the feasibility study will be confirmed by a technical, legal, financial, and market investigation by the end of January 2022.
Once pre-front-end engineering and design (FEED) is completed, engineering, procurement and construction (EPC) works will be conducted for the H2biscus project.
Source: *https://southeastasiainfra.com/mou-signed-to-develop-green-hydrogen*

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